

AMENDMENTS TO THE CLAIMS

1. – 52. (Cancelled).

53. (Currently Amended) An apparatus for aspect controlled selective etching comprising:

a plasma etching chamber for conducting a plasma etch and comprising an electrode for applying a DC bias voltage to a supported substrate and a coil for generating an RF field;

a radio frequency supply source for applying an RF voltage to said coil to generate a plasma within said chamber; and

a bias voltage modulator for applying a modulated DC bias voltage to one of said supply source and said bias voltage which varies between a first voltage and a second voltage, said bias voltage modulator configured to modulate said first voltage being at a level which ensures the deposit of material onto a first location of a substrate supported by said electrode while a second location of said substrate is etched, and said second voltage being at a level at which ensures that both first and second locations of said substrate are etched.

54. (Original) The apparatus according to claim 53, wherein said apparatus is a high voltage plasma apparatus.

55. (Previously presented) The apparatus according to claim 53, further comprising a source power of from about 400 to about 1500 watts.

56. (Original) The apparatus according to claim 54, wherein said apparatus is an inductively coupled plasma apparatus.

57. (Original) The apparatus according to claim 54, wherein said apparatus is an electron cyclotron resonance apparatus.

58. (Original) The apparatus according to claim 53, wherein said apparatus operates at a pressure of from about 2 to about 40 mTorr.

59. (Currently Amended) The apparatus according to claim 53, wherein said bias voltage modulator ~~[[has]]~~ is configured to provide a duty cycle of from about 10% to about 90%.

60. (Currently Amended) The apparatus according to claim 53, wherein said bias voltage is ~~[[varied]]~~ variable from between about 0 volts and about 300 volts.

61. (Currently Amended) The apparatus according to claim 53, ~~[[wherein said plasma is]]~~ further comprising a source for providing a fluorocarbon gas ~~[[provided]]~~ to said reactive plasma chamber ~~[[by a plasma source]]~~.

62. (Currently Amended) The apparatus according to claim 53, wherein said bias voltage modulator ~~[[modulates]]~~ is configured to modulate the source power.

63. (Currently Amended) The apparatus according to claim 53, wherein said bias voltage modulator ~~[[modulates]]~~ is configured to modulate the bias power.

64. – 74. (Cancelled).

75. (previously presented) An apparatus for selective etching of a substrate, comprising:

an etching chamber having an electrode for supporting a substrate having an opening, and a coil for generating an RF field; and

a bias voltage modulator for modulating one of a DC bias voltage of said electrode and a voltage for generating said RF field between a first voltage and a second voltage while processing the substrate, wherein said modulator is configured to modulate the voltage such that material is deposited at a first position of said opening which has a first aspect ratio, while a second position of said opening having a second aspect ratio, different from said first aspect ratio, is etched.

76. (Previously Presented) The apparatus of claim 75, wherein said first aspect ratio is less than said second aspect ratio.

77. (Previously Presented) The apparatus of claim 75, wherein said first aspect ratio is less than or equal to 5.

78. (Previously Presented) The apparatus of claim 75, wherein said first aspect ratio is from about 0.5 to about 5.

79. (Previously Presented) The apparatus of claim 75, wherein said second aspect ratio is greater than or equal to 3.

80. (Previously Presented) The apparatus of claim 75, wherein said second aspect ratio is from about 3 to about 20.

81. (currently amended) An apparatus for selective etching of a substrate, comprising:

an etching chamber having an electrode for supporting a substrate;
and

a bias voltage modulator for modulating a DC bias voltage on said electrode between a first voltage and a second voltage while etching a self-aligned contact opening in the substrate, wherein in use said voltage modulator is [[adapted]] configured to control deposition of material at a first position of said opening which has a first aspect ratio, while etching a second position of said opening which has a second aspect ratio.

82. (Previously Presented) The apparatus of claim 81, wherein said first aspect ratio is less than said second aspect ratio.

83. (Previously Presented) The apparatus of claim 81, wherein said first aspect ratio is less than or equal to 5.

84. (Previously Presented) The apparatus of claim 81, wherein said first aspect ratio is from about 0.5 to about 5.

85. (Previously Presented) The apparatus of claim 81, wherein said second aspect ratio is greater than or equal to 3.

86. (Previously Presented) The apparatus of claim 81, wherein said second aspect ratio is from about 3 to about 20.